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## EUROPEAN PATENT APPLICATION

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### (54) Safety device for a syringe assembly

(57) A syringe safety device (10) forms a fluid coupling between a sealed vial (14) and a syringe (24) and includes a tubular connector (18) having a first axial open end (18a) engaging the end of the vial (12) and a second, opposing open axial end (18b) releasably receiving a syringe (24) to use with the vial (12), the tubular connector (18) enclosing a sliding joint (22) having opposing axial ends (22a, 22b) and a passageway (56) between the ends, a first axial end (22a) configured to en-

gage an enlarged, blunt mounting end (20b) of a syringe needle (20), a second axial end (22b) configured to releasably engage at least a releasable needle receiver (30) on a distal end (32) of the syringe (24) without needle, the syringe (24) without needle being releasably removable from the sliding joint (22) after fluid coupling with the vial (14) through the passageway (56) of the sliding joint (22), without removal of the sliding joint (22) from the connector (18). The needle (20) is captured in the connector (18) with the sliding joint (22).

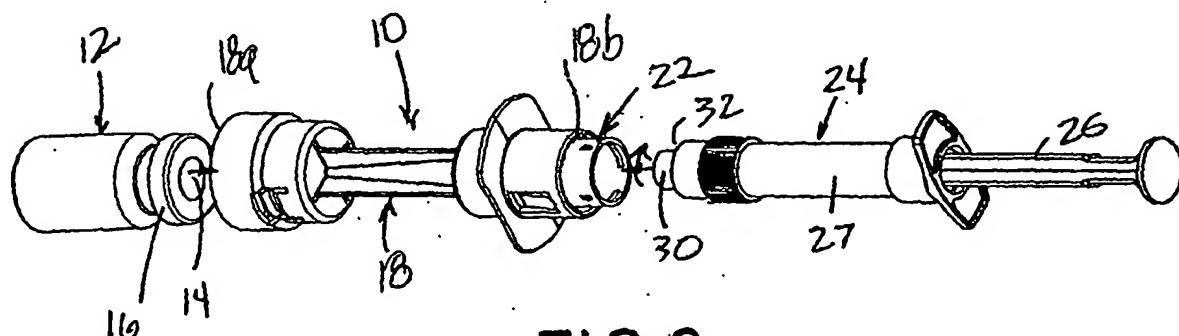


FIG. 2



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## EUROPEAN SEARCH REPORT

Application Number

EP 01 12 6279

| DOCUMENTS CONSIDERED TO BE RELEVANT  |   |  |  |
|--|---|--|--|
| Category   | Citation of document with indication, where appropriate, of relevant passages   | Relevant to claim  | CLASSIFICATION OF THE APPLICATION (Int.Cl.7) |
| X  | WO 00 54723 A (SEDAT ; ARNISSOLLE YVES (FR)) 21 September 2000 (2000-09-21)<br>* page 4, line 27 - page 5, line 6 *                                     | 1-3  | A61J1/00<br>A61M5/178                        |
| Y  | * page 5, line 27 - line 31 *<br>* page 6, line 1 - line 21 *<br>* page 9, line 11 - line 23; figures *   | 4-6  |  |
| Y  | ---   |  |  |
| Y  | FR 2 717 086 A (DEBIOTECH) 15 September 1995 (1995-09-15)<br>* page 22, line 7 - line 12 *  | 4-6  |  |
| A  | * page 24, line 19 - line 21; figures<br>12,13 *  | 11   |  |
| A  | ---   |  |  |
| A  | GB 2 235 135 A (INT MEDICATION SYSTEMS) 27 February 1991 (1991-02-27)<br>* page 7, line 33 - page 8, line 9 *<br>* page 8, line 19 - line 31; figures * | 7-9  |  |
| A  | ---   |  |  |
| A  | US 3 938 518 A (TISCHLINGER EDWARD A) 17 February 1976 (1976-02-17)<br>* column 2, line 35 - line 54; figures *   | 10   |  |
| A  | ---   |  |  |
| A  | US 2 326 490 A (PERELSON HAROLD N) 10 August 1943 (1943-08-10)<br>* page 1, right-hand column, line 44 -<br>page 2, left-hand column, line 8; figures * | 12,13  | A61J<br>A61M                                 |
| A  | ---   |  |  |
| A  | EP 0 417 988 A (BULL DAVID LAB) 20 March 1991 (1991-03-20)<br>* column 9, line 48 - column 10, line 11 *<br>* column 10, line 31 - column 11, line 3 *  | -----  |  |
|  | -----   |  |  |
| The present search report has been drawn up for all claims   |   |  |  |
| Place of search  | Date of completion of the search  | Examiner   |  |
| THE HAGUE  | 18 July 2003  | Cametz, C  |  |
| CATEGORY OF CITED DOCUMENTS  |   | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or<br>after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding<br>document |  |
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ON EUROPEAN PATENT APPLICATION NO.**

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18-07-2003

| Patent document cited in search report |   | Publication date |  | Patent family member(s)   | Publication date   |
|--|---|------------------|--|---|--|
| WO 0054723                             | A | 21-09-2000       |  | FR 2790948 A1<br>AU 3300300 A<br>EP 1161217 A1<br>WO 0054723 A1<br>JP 2002538893 T  | 22-09-2000<br>04-10-2000<br>12-12-2001<br>21-09-2000<br>19-11-2002   |
| FR 2717086                             | A | 15-09-1995       |  | FR 2715311 A1<br>FR 2717086 A1<br>AU 684544 B2<br>AU 7618094 A<br>BR 9407390 A<br>CA 2170160 A1<br>CN 1133003 A ,B<br>DE 69412492 D1<br>DE 69412492 T2<br>EP 0717611 A1<br>ES 2122321 T3<br>WO 9507066 A1<br>JP 9502116 T<br>JP 3325896 B2<br>RU 2141306 C1<br>US 5827262 A | 28-07-1995<br>15-09-1995<br>18-12-1997<br>27-03-1995<br>05-11-1996<br>16-03-1995<br>09-10-1996<br>17-09-1998<br>11-02-1999<br>26-06-1996<br>16-12-1998<br>16-03-1995<br>04-03-1997<br>17-09-2002<br>20-11-1999<br>27-10-1998 |
| GB 2235135                             | A | 27-02-1991       |  | AU 5975490 A<br>CA 2023575 A1   | 28-02-1991<br>25-02-1991   |
| US 3938518                             | A | 17-02-1976       |  | NONE  |  |
| US 2326490                             | A | 10-08-1943       |  | NONE  |  |
| EP 0417988                             | A | 20-03-1991       |  | US 4994029 A<br>AT 97327 T<br>AU 629385 B2<br>AU 6108990 A<br>CA 2023921 A1<br>DE 69004641 D1<br>DE 69004641 T2<br>DK 417988 T3<br>EP 0417988 A1<br>ES 2045820 T3<br>FI 102144 B1<br>HK 38794 A<br>IE 903140 A1<br>JP 3149061 A<br>KR 165891 B1<br>NO 903961 A ,B,          | 19-02-1991<br>15-12-1993<br>01-10-1992<br>21-03-1991<br>13-03-1991<br>23-12-1993<br>09-06-1994<br>28-03-1994<br>20-03-1991<br>16-01-1994<br>30-10-1998<br>29-04-1994<br>27-03-1991<br>25-06-1991<br>15-01-1999<br>13-03-1991 |

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ON EUROPEAN PATENT APPLICATION NO.**

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The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-07-2003

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|-------------------------|------------------|
| EP 0417988                             | A                | NZ 234986 A             | 23-12-1992       |
|  |                  | SG 13994 G              | 10-06-1994       |
|  |                  | US 5019052 A            | 28-05-1991       |
|  |                  | ZA 9006800 A            | 31-07-1991       |